

Date: Thursday, 7/13/2006 3:24:37 PM
 User: Kim Johnston

Process Sheet

Customer : CU-DAR001 Dart Helicopters Services	Drawing Name : SADDLE FITTING, AFT (OUTBOARD/INBOARD)
Job Number : 27890	
Estimate Number : 10534	
P.O. Number : N/A	Part Number : D2574
This Issue : 7/13/2006 S.O. No. : N/A	Drawing Number : D2574 REV E
Prsht Rev. : NC	Project Number : N/A
First Issue : N/A Type : MACHINED PARTS	Drawing Revision : E
Previous Run : 27764	Material : N/A
Written By : <i>[Signature]</i>	Due Date : 8/9/2006
Checked & Approved By : <i>[Signature]</i> 06-07-13	Qty: 20 16 Um: Each
Comment : Est Rev I As Per RevE 06-01-27 JLM	

Additional Product

Job Number:



Seq. #:	Machine Or Operation:	Description :
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1.0	D6101005	7075-T7351 8.25X5.0X2.5
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Comment: Qty.: 1.0000 Each(s)/Unit Total : 16.0000 Each(s)
 7075-T7351 8.25X5.0X2.5
 Make from D6101-005 billet for D2574
 Ensure that grain is along 5.00" length
 Batch No: *B25350*

*EP/S.G**06/07/21*

2.0	HAAS1	HAAS CNC VERTICAL MACHINING #1
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Comment: HAAS CNC VERTICAL MACHINING #1
 Program Batch No. *27890* Double check by: *J.F.*

1-Machine Step No 1 per Folio FA051 and inspect per attached Dimension Sheets 2-Machine Step No 2 per Folio FA051 and inspect per attached Dimension Sheets
 3-Machine Step No 3 per Folio FA051 and inspect per attached Dimension Sheets
 4-Deburr and remove all machining marks
 5-Tumble to remove sharp edges.

*PFO**J.G/EP**06/07/29*

3.0	MILLING CONV.	CONVENTIONAL MILLING MACHINE
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Comment: CONVENTIONAL MILLING MACHINE
 Machine keyway as per dwg D2573 & D2574

*J.G/EP**06/07/29*

4.0	QC2	INSPECT PARTS AS THEY COME OFF MACHINE
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Comment: INSPECT PARTS AS THEY COME OFF MACHINE

*J.G/EP**06/07/29*

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Mfg / Design Mgr	Approval QC Inspector

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Design Mgr	Approval QC Inspector
			Initial Design Mgr	Action Description Design Mgr	Sign & Date			
06/07/09	2.0	One Part Dim "V" 0.240 is 0.220"	PA 06.07.24 per DS 042	See Attached Email Acceptable	eh	06-07-24	PA 06.07.24 per DS 042	06-07-24

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes ☒ No ☐ DQA: DS Date: 06/08/09

NOTE: Date & initial all entries QA: N/C Closed: _____ Date: _____

Date: Thursday, 7/13/2006 3:24:37 PM
User: Kim Johnston

Process Sheet

Customer: CU-DAR001 Dart Helicopters Services

Drawing Name: SADDLE FITTING, AFT (OUTBOARD/INBOARD)

Job Number: 27890

Part Number: D2574

Job Number:



Seq. #:

Machine Or Operation:

Description :

5.0

QC8

SECOND CHECK



Comment: SECOND CHECK

2nd 06/08/01

20

6.0

HAND FINISHING1

HAND FINISHING RESOURCE #1



Comment: HAND FINISHING RESOURCE #1

Acid etch and Alodine as per QSI 005 4.1

FC 06/08/01

(20)

7.0

POWDER COATING

POWDER COATING



Comment: POWDER COATING

Powder Coat White Gloss (Ref: 4.3.5.1) as per QSI 005 4.3

~~*06/08/03*~~

SC 06/08/03

(20)

8.0

QC3

INSPECT POWDER COAT/CHEMICAL CONVERSION



Comment: INSPECT POWDER COAT

AL 06/08/04

9.0

PACKAGING 1

PACKAGING RESOURCE #1



Comment: PACKAGING RESOURCE #1

Identify and Stock

Location: *ST 350*

LB 06/08/04

(20)

10.0

DC

DOCUMENT CONTROL



Comment: DOCUMENT CONTROL

Inspection Level 21

DP 06/08/09

(20)

Job Completion



W 06-08-09

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Mfg / Design Mgr	Approval QC Inspector

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Design Mgr	Approval QC Inspector
			Initial Design Mgr	Action Description Design Mgr	Sign & Date			

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

NOTE: Date & initial all entries

QA: N/C Closed: _____ Date: _____

DART AEROSPACE LTD	Work Order: 27890
Description: Saddle, Aft Inboard	Part Number: D2574
Inspection Dwg: D2574 Rev. E	Page 1 of 1

Inspect dimensions highlighted on inspection sheet drawing D2574 Rev. E and record below:

Dim	Min	Max	Go/No Go Gauge	Recorded Actual Dimensions				By	Date
				1	2	SEE ATTACHED E-MAIL	4		
A	0.438	0.443	DT8682	0.441	0.441	0.441	0.441		
B	1.745	1.755		1.745	1.749	1.749	1.746		
C	3.495	3.505		3.498	3.500	3.500	3.496		
D	1.745	1.755		1.745	1.749	1.749	1.746		
E	7.990	8.010		8.001	8.003	8.002	8.003		
F	0.490	0.510		0.498	0.500	0.499	0.497		
G	0.257	0.262	DT8683	0.259	0.259	0.259	0.259		
H	0.375	0.380	DT8684	0.377	0.377	0.377	0.377		
I	0.490	0.510		0.500	0.499	0.498	0.496		
J	1.174	1.184		1.178	1.178	1.178	1.177		
K	0.558	0.578		0.563	0.561	0.565	0.564		
L	1.174	1.184		1.178	1.178	1.178	1.177		
M	1.365	1.375		1.369	1.369	1.368	1.367		
N	2.495	2.505		2.497	2.497	2.499	2.497		
O	4.119	4.129		4.123	4.120	4.122	4.122		
P	0.115	0.135		0.127	0.125	0.125	0.127		
Q	0.115	0.135		0.135	0.135	0.135	0.135		
R	0.240	0.260		0.252	0.245	0.250	0.246		
S	0.115	0.135		0.123	0.122	0.124	0.121		
T	0.178	0.198		0.188	0.188	0.188	0.188		
U	3.210	3.250		3.260	3.260	3.260	3.260		
V	0.230	0.250		0.239	0.231	0.220	0.235		
W	0.115	0.135		0.134	0.125	0.133	0.132		
X	0.307	0.312		0.309	0.309	0.309	0.309		
Y	0.760	0.765		0.765	0.765	0.765	0.765		
Z	0.352	0.372		0.368	0.368	0.367	0.365		
AA	0.470	0.530		0.500	0.500	0.500	0.500		
AB	0.615	0.635		0.624	0.624	0.626	0.628		
AC	0.053	0.073		0.063	0.063	0.063	0.063		
AD	0.240	0.260		0.248	0.242	0.245	0.244		
AE	1.500	1.520		1.510	1.508	1.511	1.508		
AF	0.115	0.135		0.135	0.135	0.135	0.135		
AG	0.240	0.280		0.260	0.260	0.260	0.260		
AH	0.240	0.260		0.250	0.244	0.244	0.245		
AI	2.000	2.020		N/A	N/A	N/A	N/A		
AJ	0.023	0.043		0.030	0.030	0.030	0.030		
Accept/Reject									

Measured by:	En
Date:	06/07/25

Audited by:	JM
Date:	06/07/27

Rev	Date	Change	Revised by	Approved
A		New Issue	RF	
B	02.09.27	Re-format; Added Rev. D	KJ	
C	02.10.11	Re-format; Added DT8682, DT8683, DT8684	KJ	
D	05.05.05	Added dimension AI	KJ/RF	
E	05.12.05	Added dimension AJ	KJ/JLM	

DART AEROSPACE LTD	Work Order: 27890
Description: Saddle, Aft Inboard	Part Number: D2574
Inspection Dwg: D2574 Rev. E	Page 1 of 1

Inspect dimensions highlighted on inspection sheet drawing D2574 Rev. E and record below:

Dim	Min	Max	Go/No Go Gauge	Recorded Actual Dimensions				By	Date
				1	2	3	4		
A	0.438	0.443	DT8682	0.441	0.441	0.441	0.441		
B	1.745	1.755		1.748	1.746	1.746	1.745		
C	3.495	3.505		3.499	3.497	3.498	3.499		
D	1.745	1.755		1.748	1.746	1.746	1.745		
E	7.990	8.010		8.004	8.004	8.003	8.003		
F	0.490	0.510		0.496	0.496	0.495	0.498		
G	0.257	0.262	DT8683	0.259	0.257	0.257	0.257		
H	0.375	0.380	DT8684	0.377	0.377	0.374	0.374		
I	0.490	0.510		0.502	0.498	0.500	0.499		
J	1.174	1.184		1.178	1.179	1.174	1.175		
K	0.558	0.578		0.564	0.566	0.566	0.563		
L	1.174	1.184		1.178	1.179	1.174	1.175		
M	1.365	1.375		1.369	1.368	1.366	1.369		
N	2.495	2.505		2.499	2.497	2.497	2.498		
O	4.119	4.129		4.123	4.123	4.123	4.123		
P	0.115	0.135		0.119	0.125	0.127	0.127		
Q	0.115	0.135		0.135	0.135	0.135	0.135		
R	0.240	0.260		0.246	0.248	0.247	0.251		
S	0.115	0.135		0.123	0.120	0.120	0.120		
T	0.178	0.198		0.188	0.188	0.188	0.188		
U	3.210	3.250		3.230	3.236	3.230	3.230		
V	0.230	0.250		0.240	0.238	0.239	0.236		
W	0.115	0.135		0.134	0.131	0.128	0.129		
X	0.307	0.312		0.309	0.309	0.310	0.310		
Y	0.760	0.765		0.765	0.765	0.765	0.765		
Z	0.352	0.372		0.364	0.366	0.368	0.361		
AA	0.470	0.530		0.500	0.500	0.500	0.500		
AB	0.615	0.635		0.624	0.622	0.624	0.627		
AC	0.053	0.073		0.063	0.063	0.063	0.063		
AD	0.240	0.260		0.244	0.246	0.246	0.248		
AE	1.500	1.520		1.508	1.508	1.509	1.509		
AF	0.115	0.135		0.135	0.135	0.135	0.135		
AG	0.240	0.280		0.260	0.260	0.260	0.268		
AH	0.240	0.260		0.249	0.248	0.250	0.248		
AI	2.000	2.020		N/A	N/A	N/A	N/A		
AJ	0.023	0.043		0.030	0.038	0.030	0.030		
Accept/Reject									

Measured by: <i>EP</i>
Date: 06/07/26

Audited by: <i>JML</i>
Date: 06/07/27

Rev	Date	Change	Revised by	Approved
A		New Issue	RF	
B	02.09.27	Re-format; Added Rev. D	KJ	
C	02.10.11	Re-format; Added DT8682, DT8683, DT8684	KJ	
D	05.05.05	Added dimension AI	KJ/RF	
E	05.12.05	Added dimension AJ	KJ/JLM	

DART AEROSPACE LTD	Work Order:	27890
Description: Saddle, Aft Inboard	Part Number:	D2574
Inspection Dwg: D2574 Rev. E		Page 1 of 1

Inspect dimensions highlighted on inspection sheet drawing D2574 Rev. E and record below:

Dim	Min	Max	Go/No Go Gauge	Recorded Actual Dimensions				By	Date
				1	2	3	4 12		
A	0.438	0.443	DT8682	0.441	0.441	0.441	0.441		
B	1.745	1.755		1.745	1.745	1.748	1.747		
C	3.495	3.505		3.500	3.499	3.499	3.500		
D	1.745	1.755		1.745	1.745	1.748	1.747		
E	7.990	8.010		8.004	8.003	8.002	8.003		
F	0.490	0.510		0.495	0.497	0.495	0.493		
G	0.257	0.262	DT8683	0.259	0.259	0.259	0.259		
H	0.375	0.380	DT8684	0.377	0.377	0.374	0.377		
I	0.490	0.510		0.497	0.496	0.496	0.498		
J	1.174	1.184		1.180	1.179	1.174	1.174		
K	0.558	0.578		0.562	0.563	0.566	0.564		
L	1.174	1.184		1.180	1.179	1.174	1.174		
M	1.365	1.375		1.366	1.364	1.368	1.366		
N	2.495	2.505		2.496	2.497	2.497	2.497		
O	4.119	4.129		4.123	4.123	4.123	4.123		
P	0.115	0.135		0.124	0.125	0.124	0.124		
Q	0.115	0.135		0.135	0.135	0.135	0.135		
R	0.240	0.260		0.249	0.248	0.248	0.247		
S	0.115	0.135		0.118	0.122	0.122	0.117		
T	0.178	0.198		0.198	0.198	0.188	0.188		
U	3.210	3.250		3.230	3.230	3.230	3.230		
V	0.230	0.250		0.236	0.238	0.240	0.238		
W	0.115	0.135		0.133	0.133	0.134	0.133		
X	0.307	0.312		0.310	0.309	0.308	0.309		
Y	0.760	0.765		0.765	0.765	0.765	0.765		
Z	0.352	0.372		0.366	0.363	0.365	0.360		
AA	0.470	0.530		0.500	0.500	0.500	0.500		
AB	0.615	0.635		0.621	0.622	0.625	0.625		
AC	0.053	0.073		0.063	0.063	0.063	0.063		
AD	0.240	0.260		0.247	0.249	0.244	0.245		
AE	1.500	1.520		1.507	1.507	1.507	1.506		
AF	0.115	0.135		0.135	0.135	0.135	0.135		
AG	0.240	0.280		0.260	0.260	0.260	0.260		
AH	0.240	0.260		0.249	0.249	0.248	0.248		
AI	2.000	2.020		N/A	N/A	N/A	N/A		
AJ	0.023	0.043		0.030	0.030	0.030	0.030		
Accept/Reject									

Measured by:	EP
Date:	06/07/27

Audited by:	Jim
Date:	06/08/01

Rev	Date	Change	Revised by	Approved
A		New Issue	RF	
B	02.09.27	Re-format; Added Rev. D	KJ	
C	02.10.11	Re-format; Added DT8682, DT8683, DT8684	KJ	
D	05.05.05	Added dimension AI	KJ/RF	
E	05.12.05	Added dimension AJ	KJ/JLM	

DART AEROSPACE LTD	Work Order: 27890
Description: Saddle, Aft Inboard	Part Number: D2574
Inspection Dwg: D2574 Rev. E	Page 1 of 1

Inspect dimensions highlighted on inspection sheet drawing D2574 Rev. E and record below:

				Recorded Actual Dimensions				By	Date
Dim	Min	Max	Go/No Go Gauge	1	2	3	4 ¹⁶		
A	0.438	0.443	DT8682	0.441	0.441	0.441	0.441		
B	1.745	1.755		1.745	1.745	1.746	1.747		
C	3.495	3.505		3.499	3.499	3.498	3.497		
D	1.745	1.755		1.745	1.745	1.746	1.747		
E	7.990	8.010		8.004	8.003	8.002	8.001		
F	0.490	0.510		0.492	0.497	0.497	0.497		
G	0.257	0.262	DT8683	0.259	0.259	0.259	0.259		
H	0.375	0.380	DT8684	0.377	0.377	0.377	0.377		
I	0.490	0.510		0.500	0.498	0.497	0.498		
J	1.174	1.184		1.179	1.177	1.179	1.180		
K	0.558	0.578		0.567	0.563	0.564	0.569		
L	1.174	1.184		1.179	1.177	1.179	1.179		
M	1.365	1.375		1.369	1.368	1.367	1.369		
N	2.495	2.505		2.495	2.495	2.497	2.496		
O	4.119	4.129		4.121	4.120	4.122	4.122		
P	0.115	0.135		0.126	0.125	0.124	0.123		
Q	0.115	0.135		0.135	0.135	0.135	0.135		
R	0.240	0.260		0.249	0.248	0.247	0.246		
S	0.115	0.135		0.121	0.125	0.124	0.123		
T	0.178	0.198		0.188	0.188	0.188	0.188		
U	3.210	3.250		3.230	3.230	3.230	3.230		
V	0.230	0.250		0.239	0.239	0.238	0.239		
W	0.115	0.135		0.134	0.130	0.129	0.129		
X	0.307	0.312		0.309	0.309	0.310	0.310		
Y	0.760	0.765		0.765	0.765	0.765	0.765		
Z	0.352	0.372		0.364	0.361	0.361	0.361		
AA	0.470	0.530		0.500	0.500	0.500	0.500		
AB	0.615	0.635		0.620	0.620	0.621	0.621		
AC	0.053	0.073		0.063	0.063	0.063	0.063		
AD	0.240	0.260		0.244	0.245	0.246	0.246		
AE	1.500	1.520		1.508	1.508	1.508	1.508		
AF	0.115	0.135		0.135	0.135	0.135	0.135		
AG	0.240	0.280		0.260	0.260	0.260	0.260		
AH	0.240	0.260		0.248	0.248	0.247	0.247		
AI	2.000	2.020		N/A	N/A	N/A	N/A		
AJ	0.023	0.043		0.030	0.030	0.030	0.030		
Accept/Reject									

Measured by:	EP/S.G.
Date:	06/07/09

Audited by:	ML
Date:	06/08/01

Rev	Date	Change	Revised by	Approved
A		New Issue	RF	
B	02.09.27	Re-format; Added Rev. D	KJ	
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DART AEROSPACE LTD		Work Order:	27890
Description: Saddle, Aft Inboard		Part Number:	D2574
Inspection Dwg: D2574 Rev. E		Page 1 of 1	

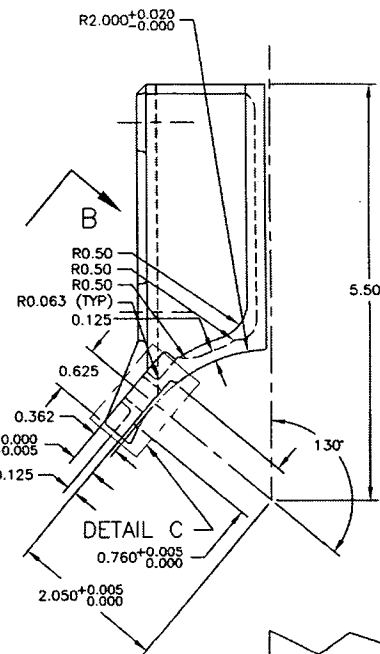
Inspect dimensions highlighted on inspection sheet drawing D2574 Rev. E and record below:

				Recorded Actual Dimensions					
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B	1.745	1.755		1.747	1.746	1.745	1.746		
C	3.495	3.505		3.499	3.498	3.497	3.498		
D	1.745	1.755		1.748	1.747	1.747	1.747		
E	7.990	8.010		8.001	8.001	8.001	8.001		
F	0.490	0.510		0.499	0.498	0.499	0.498		
G	0.257	0.262	DT8683	0.259	0.259	0.259	0.259		
H	0.375	0.380	DT8684	0.377	0.377	0.377	0.377		
I	0.490	0.510		0.501	0.500	0.499	0.498		
J	1.174	1.184		1.179	1.179	1.180	1.179		
K	0.558	0.578		0.568	0.567	0.568	0.569		
L	1.174	1.184		1.179	1.180	1.179	1.180		
M	1.365	1.375		1.372	1.371	1.372	1.372		
N	2.495	2.505		2.499	2.497	2.496	2.497		
O	4.119	4.129		4.122	4.121	4.120	4.122		
P	0.115	0.135		0.125	0.124	0.123	0.124		
Q	0.115	0.135		0.135	0.135	0.135	0.135		
R	0.240	0.260		0.252	0.251	0.249	0.248		
S	0.115	0.135		0.124	0.123	0.124	0.123		
T	0.178	0.198		0.188	0.188	0.188	0.188		
U	3.210	3.250		3.230	3.230	3.230	3.230		
V	0.230	0.250		0.241	0.241	0.240	0.241		
W	0.115	0.135		0.124	0.123	0.123	0.124		
X	0.307	0.312		0.310	0.310	0.310	0.311		
Y	0.760	0.765		0.765	0.765	0.765	0.765		
Z	0.352	0.372		0.364	0.364	0.365	0.365		
AA	0.470	0.530		0.500	0.500	0.500	0.500		
AB	0.615	0.635		0.624	0.625	0.624	0.625		
AC	0.053	0.073		0.063	0.063	0.063	0.063		
AD	0.240	0.260		0.241	0.240	0.241	0.241		
AE	1.500	1.520		1.510	1.511	1.512	1.513		
AF	0.115	0.135		0.135	0.135	0.135	0.135		
AG	0.240	0.280		0.260	0.260	0.260	0.260		
AH	0.240	0.260		0.249	0.248	0.247	0.246		
AI	2.000	2.020		N/A	N/A	N/A	N/A		
AJ	0.023	0.043		0.030	0.030	0.030	0.030		
Accept/Reject									

Measured by:	J.G
Date:	06/07/30





Audited by:	[Signature]
Date:	06/08/01

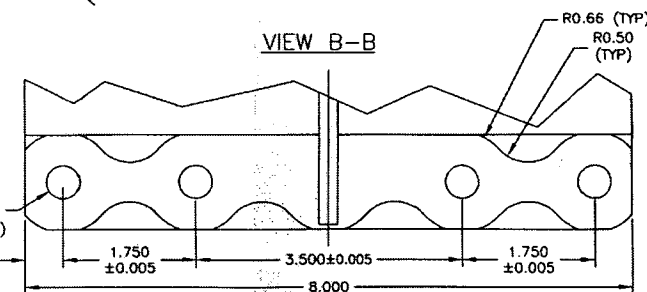
Rev	Date	Change	Revised by	Approved
A		New Issue	RF	
B	02.09.27	Re-format; Added Rev. D	KJ	
C	02.10.11	Re-format; Added DT8682, DT8683, DT8684	KJ	
D	05.05.05	Added dimension AI	KJ/RF	
E	05.12.05	Added dimension AJ	KJ/JLM	[Signature]



05.2.06




MATERIAL: 7075-T7351 (QQ-A-250/12)
(REF DART SPEC. D8102-003)
FINISH: ACID ETCH, ALODINE PER DART QSI 005 4.1
POWDER COAT GLOSS WHITE (REF 4.3.5.1) PER
DART QSI 005 4.3
BREAK ALL SHARP EDGES 0.010 TO 0.020
TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED

- | | |
|---|--|
|  | ENGRAVE PART AND BATCH NUMBER IN THIS AREA TO MAX DEPTH OF 0.010 |
|  | CHAMFER 0.063" x 45° AROUND THIS SURFACE (TYPICAL 2 PLACES) |
|  | CHAMFER 0.063 x 45° ALL AROUND |
|  | CHAMFER 0.033 x 45° (SEE DETAIL C) |



DETAIL C
SCALE 2:1

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E	05.07.13	ADD CHAMFER ON RIDGE NOTE 4
D	02.09.06	ADD RIDGES; TIGHTEN TOLERANCES
C	99.10.22	INCRP. DEO 9123/9079/9102 ADD DIMENSIONS PER TSR A1177
B	96.12.02	ADD GRAIN DIR., 0.438 WAS 0.425
A	96.09.16	NEW ISSUE
DESIGN DS		DRAWN BY PH
CHECKED 		APPROVED 
DATE 05.07.13		TITLE INNER AFT SADDLE
		 DART AEROSPACE LTD. MARKHAM, ONTARIO, CANADA
		REV. SHEET 1 OF 2

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WORK ORDER
NO. 27890

Peter Hum

From: David Shepherd [dshepherd@dartaero.com]
Sent: July 24, 2006 2:55 PM
To: 'Peter Hum'
Subject: RE: D2574 B27890 flat dimension

I think this is an acceptable deviation.

David

From: Peter Hum [mailto:phum@dartaero.com]
Sent: Monday, July 24, 2006 12:16 PM
To: 'David Shepherd'
Subject: D2574 B27890 flat dimension

David,

In machining the D2574 saddle, the thickness of the crosstube bore near the flat is 0.220 and the nominal dimension is 0.240. I've attached a sketch to illustrate the location.

Is this deviation acceptable?

Peter <<...>>